ABSTRACT

The invention provides a ring-opened polynorbornene that is relatively low in birefringence, has specific wavelength dependency about birefringence and is excellent in transparency and heat resistance.

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[Solving means] The polymer of the present invention has a structural unit (I) of the general formula (I): [Chemical formula 1]

General Formula (I)
$$R^{11} R^{12}$$

$$R^{13} R^{23}$$

$$R^{24} R^{13}$$

$$R^{24} R^{25}$$

$$R^{25}$$

$$R^{25}$$

$$R^{25}$$

$$R^{25}$$

$$R^{26}$$

$$R^{27}$$

$$R^{26}$$

wherein in the general formula (I), m and n are integers of 0 to 2, X¹ is an ethylene or vinylene group, R¹ and R² are individually a hydrogen atom or a substituted or unsubstituted hydrocarbon group having 1 to 30 carbon atoms, and R₃ is a group of the general formula (I-1) or (I-2), in which in the general formulae (I-1) and (I-2), R¹¹ to R²′ are individually a hydrogen atom; a halogen atom; a substituted or unsubstituted hydrocarbon group having 1 to 30 carbon atoms, which may have a linkage containing or not containing oxygen, sulfur, nitrogen and/or silicon atom(s);

or a polar group, p and q in the general formula (I-1) are individually 0 or a positive integer, with the proviso that when both p and q are 0, R^{12} and R^{15} , or R^{19} and R^{15} may be bonded to each other to form a carbon ring or heterocyclic ring, and the carbon ring or heterocyclic ring may be either a monocyclic structure or a polycyclic structure, and s in the general formula (I-2) is 0 or a positive integer.